

# Chapter 4. Meeting the Challenges of ePortfolio Implementation at Four-year Institutions: Software, Support, and Collaboration

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Well, sometimes the magic works. Sometimes, it doesn't.

—*Old Lodge Skins, Little Big Man* (Penn, 1970)

The implementation of an institutional-wide ePortfolio model at a four-year institution can present a series of challenges that community colleges and large universities do not customarily face. These issues range from providing sufficient, meaningful support—technical, pedagogical, and philosophical—to ensuring ownership among all stakeholders. Furthermore, well-staffed, interdisciplinary learning/teaching centers are not always a given on undergraduate campuses, while smaller student populations often result in a limited instructional technology (IT) staff serving multiple departments and/or purposes at the same time. Thus, the workload required for launching an institutional ePortfolio program lands squarely on the shoulders of teaching/research faculty.

We do not mean to suggest that these unique challenges exempt four-year colleges from the same problems discussed in other chapters of this book or vice-versa: software choice, faculty buy-in, mobility, and intra-/extramural access, to name a few. Resolution of the same questions on our campuses, however, necessitates a different approach, one that not only considers the availability and nature of human and financial resources, but also respects equity among disciplinary programs within the context of undergraduate education.

This chapter focuses on “what we know” (now) from the proverbial hits and misses in the attempt to implement an institutional ePortfolio at the Virginia Military Institute (VMI). Looking back on a very effective *backend/frontend* collaboration and a less-than-successful interdisciplinary ePortfolio program, we identify specific strategies for the 5Ws and the H<sup>1</sup> of starting small and fomenting a collective vision.

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1. The 5Ws and the H: What, Who, Where, When, Why, and How

## Priorities and Expenses on Four-Year Campuses

Prompted by the demand for support programs on the one hand and accreditor oversight on the other, priorities in undergraduate education have shifted dramatically since the final decade of our last century. As a result, new spending categories have emerged while traditional classifications have fused or entirely collapsed. Concepts traditionally associated with K–12 education such as reading/math remediation, developmental education, and counseling now vie for space, faculty, staff, and funding against traditional academic programs.

In its 2016 publication, “Trends in College Spending: 2003–2013,” the American Institutes for Research (AIR) report an ongoing trend in non-instructional student services spending at four-year colleges, marked by an 11.1% increase at public institutions and a 21.8% increase at private colleges (Desrochers & Hurlbut, 2016). By comparison, academic support spending increased by 8% and 5% respectively during the same time period, with instructional expenses accounting for 3% of the budget at public institutions and 5% on private campuses (Desrochers & Hurlbut, 2016). Department of Education (DOE) statistics per full-time-equivalent (FTE) student in their category “student services, academic support, and institutional support” at public four-year colleges between 2010–2011 and 2015, for the most part, support the AIR findings.<sup>2</sup>

Reading, Writing, and Math remediation costs and other types of developmental education have increased exponentially since the beginning of this decade. Data collected by The Hechlinger Report, published in 2017, showed that 96% of the 911 reporting colleges enrolled students in remediation courses during the 2014–2015 academic year at a cost of \$7 billion a year to colleges, students, families, and taxpayers (Butrymowicz, 2017). Other researchers and think tanks estimated that one of every four college students was enrolled in a remedial program during the 2015–2016 academic year at a cost of between \$1.3B and \$1.5B (Jimenez et al., 2016), with the middle class footing most of the bill (Education Reform Now, 2016).

As the demand for developmental education has increased, so has the number of students seeking psychological and counseling services provided on campus (Reilly, 2018). The American College Health Association reported that in the same time period (2015–2016) 40% of 63,000 college students surveyed had suffered depression that affected their ability to perform, while another 61% reported feeling “overwhelming anxiety” (Reilly, 2018). Forty-eight percent of four-year colleges provided psychiatric services (Kwai, 2016).

At the heart of these remedial and counselling expenditures lie both attrition and completion rates. Four-year degrees have taken college students increasingly more time to complete since 2010, climbing to an alarming 62% of students

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2. At the time of writing, the most recent statistics available correspond to the 2015–2016 academic year.

who spend six years earning their degree at four-year institutions, according to the Department of Education (National Center for Education Statistics, 2018). However, retention rates reached an all-time high of 81% in the 2015–2016 academic year, suggesting the worthiness of investment in student/academic support services and its correlation to the six-year completion rates (National Center for Education Statistics, 2018).

With the declining interest in a liberal arts education and the very real struggle to endure, especially in non-urban settings, four-year colleges find themselves in a precarious financial position. Raising tuition costs to maintain support services is rarely wise, and state governments can prohibit public institutions from raising tuition. Private institutions have fared worse. According to *US News & World Report* (2018), 28% of some 500 small private colleges studied over the last 50 years, mostly liberal arts institutions, have either shut down, merged, or redefined their mission statements.

Ironically, students enrolled in remedial programs or receiving mental health services more likely than not would find refuge and purpose through the developmental ePortfolio process, in addition to witnessing their own academic and emotional growth—albeit perhaps in different ways than their classmates. But given, on the one hand, the financial stress of providing non-academic services and the ensuing snowball effect on tenure lines, hiring, funding, and teaching assignments on the other, it is understandable that the implementation of a campus-wide ePortfolio program may not head the list of priorities among the principal stakeholders at four-year institutions.

## Background: The VMI ePortfolio Project (2009–2014)

Fortunately, VMI does not typically face the financial and existential challenges of other four-year institutions; alumni contribute generously to their alma mater. Our learning center, for example, exists thanks to one alumnus' earmarked donation. Two very important alumni groups, in addition to the VMI Foundation, have funded countless research, experiential, and study abroad programs for both cadets and faculty. The 2008 recession, however, hit us hard, despite the ongoing gifts from alumni.

Coinciding with the economic downturn, the VMI ePortfolio Project was initiated in the fall of the 2008–2009 academic year as part of the Institute's "Quality Enhancement Plan" (QEP) for reaccreditation through the Southern Association of Colleges and Schools (SACS). Consistent with the military environment that defines VMI, the decision for the ePortfolio Project was made at the top of the academic chain of command and passed down to the faculty, along with the mandate that all departments would participate in the program through their curricula.

The ePortfolio Project remained housed in the ethernet for the duration of its life (Spring 2009–Spring 2014), even though the dean assigned the oversight of

the project to specific senior faculty. On their advice, Edward M. White's (2005) "Phase 2" writing (print) portfolio scoring model for *assessment* was adopted, as it had proved efficient in the rating of traditional paper portfolios.

All instructors teaching ePortfolio-embedded courses received an invitation to participate in the two-day scoring session. In accordance with the White (2005) model, institutional ePortfolio scorers rated only a hard copy of the required reflective essay with no access to cadets' ePortfolio *artifacts*. Organization of the assessment venue, from ordering paper clips to collating data, was the responsibility of an appointed "Director, VMI ePortfolio Project." The director received a course release as compensation for assessment duties and year-long responsibilities related to faculty and cadet training as well as pedagogical and technological troubleshooting. Two tenured professors served consecutively in this role, but not autonomously.

For the first three years of the program, a plugin to our learning management system (LMS), Angel®, served as the sole ePortfolio platform. An IT Help Desk specialist and the ePortfolio Project director worked closely to separate pedagogy from technology and developed a system for addressing the inevitable issues that stakeholders had (see Appendix for "ePortfolio Troubleshooting Flowchart"). Cadets and faculty responded positively, and our system proved quite successful, as we could resolve issues quickly and with relative ease.

The advantage of the LMS plugin centered on user-friendliness for faculty and cadets. It required only the most basic computing skills, while not unnecessarily complicating the collection and coding of data for assessment. An ePortfolio icon on cadets' LMS home page provided direct access to the ePortfolio *workspace*, organized as per the following six tabs:

My Info	Artifacts	History	Blogs	Objectives	Publications
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In the "My Info" section, cadets entered their VMI timeline and major and details of other formal educational experiences in the "My Education History" ("History" tab). Learners could import work directly from the LMS to their ePortfolio artifact repository ("Artifacts" tab) as well as upload any other evidence they deemed relevant to their academic and personal development. Individual instructors could assign the "Blogs" section for logging and reflecting on learning experiences. As well, instructors had the option of posting the course objectives and/or the institute-designated learning outcomes for ePortfolio courses in the "Objectives" section. Cadets could then link their evidence to the corresponding learning outcome.

The "Publications" section of the program proved especially clunky and inconsistent with the long-term goals of the VMI ePortfolio. Cadets had to publish a different ePortfolio for each course; hyperlinks connecting publications often failed and detracted from the already limited cohesiveness and aesthetics. Similarly, the program offered no design options, merely the organization of artifacts and choice of font. Every publication shared a uniform white background.

In a very short time, the limited affordances provided by the LMS plugin proved frustrating, especially to tech-savvy cadets and faculty. In addition, with access restricted to the VMI intranet, cadets could not continue developing their ePortfolios after graduation. The assessment components of the plug-in, although uncomplicated, weakened the pedagogical benefits of the ePortfolio for learners and faculty, alike. Assessment was driving the technology and in turn, the technology was driving the pedagogy when it should be the other way around (see Summers et al. and Day, this collection).

Therefore, on the recommendation of a new ePortfolio director, a WordPress platform hosted by EduBlogs, now CampusPress, became the sole program permitted for the VMI ePortfolio. Tied less to assessment and more to reflective learning, this platform offered some of the benefits of the LMS plug-in, with LDAP-integration and the protection of student data, but also allowed for a more creative *showcase* for *multi-modal* assignments, *reflection* in blogs and pages, and considerations for building a career profile for use after graduation. EduBlogs also provided backend support, thus relieving an already overstretched IT staff and taking the burden of technology-related issues off the shoulders of the ePortfolio director, allowing him to concentrate his efforts on training.

Much like the Western hero, the VMI ePortfolio Project, as a mandate to departments and faculty, disappeared slowly over the horizon (but sadly no one yelled out, “Come back . . . come back”). The Institute has continued to renew the EduBlog/CampusPress license for the WordPress ePortfolio, which at this writing is housed in the VMI Writing Center and used almost exclusively by the Department of English, Rhetoric, and Humanistic Studies (ERH). Interest from co-curricular programs such as Career Services, the academic support center, and ROTC has waned along with that of the majority of teacher/scholars and cadet stakeholders.

## The 5Ws and the H

### What? What is an electronic portfolio? What is it not?

A decade ago, electronic portfolios did not have the visibility they have across U.S. campuses today, so many of the questions with which we dealt at VMI would now qualify as moot. Nonetheless, and at the risk of eliciting a studentesque “duh” from our readers, we must emphasize that the beginning point for all stakeholders is to understand the purpose of the institutional ePortfolio (see Richardson et al., this collection). Failing to ensure that everyone begins with a common understanding of purpose, audience, and agency during the planning stage will mean unnecessary frustration in the long run; stakeholders’ understanding of the “big ideas” and baseline components of an ePortfolio is non-negotiable. That said, planning committees may increase their chances for an auspicious roll-out by starting from what an ePortfolio *is not*.

Confusion about new ways of presenting information is not unique to our age, but merely the most recent iteration of misunderstandings that have occurred throughout human history, as we have defined and redefined communication and literacy across the millennia. In Ancient Greece, Socrates mistrusted the newly created alphabet, “believ[ing] that the seeming permanence of the printed word would delude [the young] into thinking they had accessed the heart of knowledge, rather than simply decoded it” (Wolf, 2007). Consider as well, the epistemology of film-making from the Lumière brothers’ inventions—the movie camera and projector—in 1895 and cinematography as we know it today, or the establishment of film studies as its own discipline, separate from literature.

From the very beginning of the VMI ePortfolio Project, we struggled with stakeholders’ confusion about “electronic ink”—an electronic, verbatim version of an original printed text—vs. “digital text,” which exploits hypermedia to produce a multi-layered, multimodal version of the text (Escandell Montiel, 2014). Much of the misunderstanding was rooted in the required reflective essay, scored with no consideration of ePortfolio artifacts and evaluated in hard copy only, which in turn generated a litany of faculty concerns regarding ePortfolio ownership, *curation*, and extradepartmental directives.

## Who? Who Gives the Orders and Who Marches? Or Do We March Together?

Without faculty buy-in, there can be no faculty engagement, no matter how authoritative the mandate (see Richardson et al. and Summers et al., this collection). The top-down decision to initiate an institutional ePortfolio program at VMI compromised faculty commitment from the very beginning, and the same indifference to faculty input ultimately led to its failure. At our college, faculty received no invitation to join the conversation about implementation of an institutional ePortfolio and, thus, had no opportunity to seek compromises or to discuss the non-negotiables. We posit that a broader discussion about the steps required for implementation would have gained greater faculty support early in the process (Mullaney, 2018).

Cadets quickly formed their own definition of the reflective essay, which varied little from that of their instructors. With the reflective essay as the focus of ePortfolios, and that essay being based on the same prescribed, uniform prompt across all disciplines, we deprived cadets of cultivating curation skills, career connections (see Polly et al. and Coleman et al., this collection), *folio thinking* (see Sanborn & Ramirez and Day, this collection) and, worst of all, agency. Although cadets chose artifacts from their course ePortfolio to provide evidence in their essays, they had no guarantee that their audience for those artifacts would extend beyond the course instructor. Furthermore, in spite of both ePortfolio directors’ investment of their own free time, including Saturdays, for workshops with new

cadets to work on a broader, longitudinal ePortfolio to document their cadetship, the lack of incentive, on the one hand, and want of encouragement outside the workshops, on the other, resulted in only one professional, longitudinal ePortfolio in the six years of the project.

Hypotheticals do not change previous mistakes, but the “should-haves” and “could-haves” can serve to inform subsequent initiatives as well as peer institutions in the planning stages of ePortfolio implementation. We cannot overstate the importance of involving as many stakeholders as possible in the planning, assessment, and ongoing revision of any ePortfolio model or program (see Polly et al. and Coleman et al., this collection). Students, IT staff, co-curricular program representatives, librarians, and institutional assessment officers as well as cross-generational faculty members across all disciplines must have a voice and play an active role in any ePortfolio initiative if it is to be successful (see Richardson et al., this collection). As outlined by William Mullaney (2018), support or backing—buy-in if you will—depends on: 1) conversation—“lots of it”; 2) openness to compromise; and 3) consensus on non-negotiables. Finally, we urge the recruitment of ePortfolio enthusiasts and curious stakeholders for the ePortfolio committee; attempts at converting non-believers only lead to frustration and burnout. An inclusive, engaged ePortfolio exploratory and ongoing steering committee stands as the first and, if it must, the only non-negotiable.

## Why? Why Are We Doing This?

Like mortar on bricks, a collective vision—the *why* of an institutional ePortfolio program—not only safeguards stability, but also creates a cohesive whole without compromising the strength of the individual parts. Different perspectives, all of which are rooted in the particular expertise of stakeholder groups, inform and nurture the collective vision. Spending time, energy, and money on putting out small fires constantly ignited and reignited by confusion is a waste of resources that would better serve the initiative through other ePortfolio-related events.

By different perspectives and areas of expertise, we are referring to the concomitant relationship between disciplinary or departmental-specific goals, computer competency, and the institutional ePortfolio in terms of purpose and scope (see Terry & Whillock and Day, this collection). When we reflect on the VMI ePortfolio Project, we can easily identify two groups whose input would have given shape to a collective vision in the very beginning: the IT staff and the cadets. The cost and 2008 economic climate aside, IT staff in conjunction with the Academic Technology Committee or individual faculty members committed to the project, along with a cross-section of cadets, would have laid a much firmer foundation on which to build both our *why* and our ePortfolio program.

The Institute contracted the Angel plug-in around Thanksgiving and implementation began in January. On the backend, IT assumed there would be no dif-



ference in licensing between the Angel LMS and the plug-in, and that the Angel ePortfolio platform would provide sufficient storage and ample file-size limits. Faculty and cadets also expected generous file-size and storage limits on a platform that would foment creative thinking and discourage uniformity.

The reality proved quite different. VMI purchased a block of licenses for the LMS which covered all cadets, faculty, and staff; however, the ePortfolio licenses were sold separately. Since an ePortfolio license was now needed for every LMS user, the Institute needed to contract X-number of licenses, one for each cadet, faculty member, and staff member who would be using the ePortfolio. As the ePortfolio users changed, the licenses were updated manually to free them up for other users. Limited storage and file size obligated ePortfolio creators to link artifacts rather than embed them within the ePortfolio, which, in turn, quelled originality. The rigid layout and extramural inaccessibility countered our assertions about the potential of an interdisciplinary ePortfolio program. Groups and individuals looked at the ePortfolio in different ways (mostly as a chore), and coped by devising their own definition of artifacts (e.g., a collection of scholarly articles) and publication, which included links from the assignment drop box on Angel to the ePortfolio plug-in or a one-time-only upload of artifacts at the end of the semester. Some professors required cadets to print all their artifacts along with their essay for grading.

We had no collective vision or shared mission beyond compliance with the mandate, which forcibly made the ePortfolio the dreaded “add-on” very quickly. Even the more flexible WordPress platform failed to turn back the tide of frustration; it was simply too late: coping mechanisms had become habits through which instructors rejected or redefined the ePortfolio’s purpose and significance for the learner.

To those in the planning stages, we reiterate the urgency of starting small, but with a broad, diverse spectrum of experience and expertise, and a positive disposition towards collaboration. The fusion of different perspectives and aptitudes can only enrich the collective vision and illuminate the process (see Richardson et al. and Summers et al., this collection).

## Where? Where Is the ePortfolio Housed?

An important consideration for the ePortfolio committee members at four-year institutions is where to house the ePortfolio, both for financial reasons and proprietary attitudes of faculty, more often than not in conflict with each other. Housing in a department implies ownership but, more importantly, it creates the perception/misperception that specific disciplinary conventions define ePortfolio pedagogy, which in turn serves the host department with no benefit to the rest.

In our case, the barebones definition we presented to faculty—a collection of a student’s artifacts with reflections on learning—generated skepticism and increased resistance. The name, after all, suggests that an ePortfolio is a digital



repository in which students collect their work and reflections. Understandably, some faculty members felt that the VMI network should house individual cadet folders to serve as electronic portfolios. Others suggested using a dedicated drop box or message board within the LMS or third-tier webpages for each cadet on the VMI website to save the investment of both time and funds. Still others asked why social media, in particular Facebook, would not prove more economical and user-friendly.

The question for exploratory committees becomes: if not in a department, where? Small colleges cannot afford the budget or the personnel for the creation of an in-house ePortfolio platform (see Day and Terry & Whillock, this collection) and/or the IT staff is limited to assisting with the technology and cybersecurity, not instruction or assessment beyond LMS administration. The missions of learning centers, while not necessarily in conflict with those of ePortfolio programs, establish separate priorities and designated performance expectations.

Housing also applies to the adopted software; in fact, the software may in itself resolve the ownership issue and subdue doubts about a hidden agenda. Backend support offered by ePortfolio vendors combined with the ubiquitous cloud storage available these days nullifies many of the issues we had a decade ago. Ideally, the ePortfolio home pertains to a neutral academic space shared by all departments and programs, but that is a cost-prohibitive solution these days for four-year colleges, as we have previously discussed. An instructional technology specialist, on campuses lucky enough to have one, removes the burden on faculty and IT alike and mitigates the (mis)perceptions of propriety.

It is likely that the determination of the ePortfolio's cloud or department home may bring with it the first opportunity for negotiation among the stakeholder representatives (see Terry & Whillock, this collection); perhaps not. Nevertheless, the collective vision together with the well-defined shared mission we discussed previously should certainly facilitate the discussion.

## When? When Will We Know We've Reached the Endgame?

If our reader is to take just one thing away from this chapter— in addition to the non-negotiable ePortfolio committee— it should be the need to identify the endgame and the milestones to getting there. One of our colleagues, now retired, used to cite what he called “the good ideas fairy.” The good ideas fairy, he maintained, came around at night, sprinkling good ideas across campus and academic divisions. The worthiness of the ideas themselves notwithstanding, it seemed to him that good ideas outnumbered the long-term, fruitful initiatives.

As the British Army's 7Ps bluntly state, “proper planning and preparation prevents piss-poor performance” (“7 Ps,” 2019), and proper planning and preparation include a timeline from planning to endgame, all of which can count on administrative support.

# How? How Can We Implement an Interdisciplinary ePortfolio?

Grant Wiggins and Jay McTighe’s (2007) *backward design* framework has radically changed the way we plan instruction and assess learning for those teaching faculty and programs who have embraced it. We suggest backward design can serve as purposefully in the conception and development of an institutional ePortfolio program. In fact, it is only logical, as most instructors will, at the very least, have heard the term. Colleges with a teacher education program have the advantage of faculty members with a command of the “Understanding by Design” (UbD) model.

Backward design consists of three phases: 1) identifying desired results; 2) determining acceptable evidence; and 3) planning learning experiences and instruction (as cited in Bowen, 2017). UbD assessment and learning activities align with the tenets of *Constructivist* methodology, valuing *authenticity*, evidence of learning, and heuristics. Using the template that can be downloaded from Jay McTighe’s website, backward design of an ePortfolio program may look like Figure 4.1:

Stage 1 – Desired Results	
<b>ESTABLISHED GOALS</b> Provide a platform for students to demonstrate learning, make connections, and reflect on academic and co-curricular experiences Widen the lens through which faculty view both their discipline and individual students Support interdisciplinarity and qualitative assessment.	
<b>Transfer</b>	
<i>The ePortfolio will allow students to independently use their learning to...</i> <ul style="list-style-type: none"><li>• make connections between academic, extracurricular, and life experiences</li><li>• demonstrate digital literacy</li><li>• define their digital identity as a student, pre-professional, and citizen</li></ul>	
<b>Meaning</b>	
<b>UNDERSTANDINGS (aka “big ideas”)</b> <i>Students will understand that...</i> <ul style="list-style-type: none"><li>• learning is not linear</li><li>• evidence of learning is not limited to exams, essays, and reports</li><li>• “we do not learn from experience, we learn from reflecting on experience” (John Dewey)</li></ul>	<b>ESSENTIAL QUESTIONS</b> <ul style="list-style-type: none"><li>• What? So what? Now what? (Balthazor et al)</li><li>• How can I evidence learning?</li><li>• In what ways can I show career-readiness?</li></ul>

Acquisition	
<i>Students will know...</i> <ul style="list-style-type: none"> <li>• how to exploit the affordances of technology for multiple purposes</li> <li>• ways of thinking critically in the process of creation, curation, and selection/substitution</li> </ul>	<i>Students will be skilled at...</i> <ul style="list-style-type: none"> <li>• demonstrating understanding in multiple ways</li> <li>• providing and accepting suggestions and friendly criticism from peers</li> <li>• using social media in new ways and in the projection of a digital self</li> </ul>
Stage 2 – Evidence and Assessment	
Evaluative Criteria	Assessment Evidence
Rubrics Assessment venues Qualifications of evaluators	<b>PERFORMANCE TASK(S):</b> <ul style="list-style-type: none"> <li>• multimodal publications</li> <li>• curation</li> <li>• peer review</li> <li>• conferencing</li> <li>• service learning experience(s)</li> </ul>
	<b>OTHER EVIDENCE:</b> <ul style="list-style-type: none"> <li>• reflective pieces</li> <li>• artifact captioning</li> <li>• hyperlinks</li> </ul>
Stage 3 – Learning Plan	
<i>Summary of Key Learning Events and Instruction</i> <ul style="list-style-type: none"> <li>• Appointment of an ePortfolio Exploratory Committee</li> <li>• Identifying stakeholder needs</li> </ul>	

*Figure 4.1. Backward design template for an institutional ePortfolio program.*

Adamantly opposed to prescriptiveness as ePortfolio practitioners, we are not putting forth this design as a blueprint for any institution. Its purpose is merely to show an efficient way for four-year colleges to address the 5Ws and the H we have outlined in this chapter. We hold that “ePortfolio” defines an ethos, which extends far beyond “an/the ePortfolio” in any form. Different methodologies merge in proved techniques because good teaching is just good teaching, regardless of learning styles and exceptionality. ePortfolio is no exception.

## Conclusion

Hindsight is 20/20, and as we look back on our attempts to establish a meaningful

and thriving institutional ePortfolio program, we can easily identify the “should-haves” and “would-haves” of our didn’t-do list, all of which, in reality, hindered the program from the start. Even with the top-down directive, appointment of an exploratory or steering committee comprised of cross-generational, cross-disciplinary, tech savvy teaching/research and academic support faculty, along with cadets, representatives from IT, and staff from the library might have assuaged the tension and frustration.

We understand that in today’s environment, the omnipresence of ePortfolios in higher education, together with the number of software programs on the market, have short-circuited a great number of the issues we faced a decade ago and have discussed in this chapter. But in other cases, the same types of challenges exist, prompted by the budgetary exigencies of student services, academic and non-academic support, together with the costs of sustainability and ultimately survival for many four-year colleges.

The financing of a sustainable, compelling institutional undergraduate ePortfolio represents one of many considerations that colleges should include in the backward design of a viable program. “Understandings” and “essential questions” defined by the principal stakeholders, even in the case of mandated goals or standards, will facilitate the discussion during the exploration phase. Defining what students will know about the ePortfolio (declarative knowledge) and what they will be able to do with their ePortfolio ensures the minimal required standardization, but also allows students to exploit the affordances of ePortfolio publication interdisciplinarity without violating disciplinary boundaries.

In sum, the endless possibilities of ePortfolios leave the door open to creativity in all aspects of exploration, adaptation, implementation, assessment, and revision, even funding. Starting small with an open door and representation of all stakeholder groups facilitates implementation and ensures a plan for dealing with the inevitable challenges to sustainability.

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## Appendix. Troubleshooting the VMI ePortfolio

